

WHAT IS CLAIMED IS:

1 1. A system for delivering medication, comprising:
2 an infusion pump;
3 a control system for controlling medication delivery by the infusion pump; and
4 a bolus estimator for estimating an appropriate amount of medication for delivery by
5 the control system with the infusion pump, wherein estimating the appropriate amount of
6 medication for delivery is based upon one or more settings which each vary according to a
7 setting profile.

1 2. The system of claim 1, wherein the control system controls medication
2 delivery according to one or more medication delivery profiles.

1 3. The system of claim 2, wherein the one or more medication delivery profiles
2 comprises the appropriate amount of medication estimated by the bolus estimator.

1 4. The system of claim 1, wherein the one or more settings are selected from the
2 group including target blood glucose, carbohydrate ratio and insulin sensitivity.

1 5. The system of claim 1, wherein the setting profile for at least one of the one or
2 more setting includes a value which varies according to a schedule.

1 6. The system of claim 1, wherein the control system is programmed to control
2 medication delivery from a source selected from the group including an RF programmer, a
3 communication station and direct input.

1 7. The system of claim 1, wherein the bolus estimator estimates the appropriate
2 amount of medication based upon one or more event markers stored in a memory.

1 8. The system of claim 7, wherein the one or more event markers track events
2 which affect medication need.

1 9. The system of claim 7, wherein the one or more event markers are selected
2 from the group comprising a meal marker, a snack marker, a high blood glucose marker, a
3 low blood glucose marker, an exercise marker, an illness marker and a stress marker.

1 10. The system of claim 1, wherein the setting profile is entered with a graphical
2 programming interface.

1 11. The system of claim 10, wherein the graphical programming interface
2 includes a series of discrete divisions, each having a setting value and the setting profile is
3 programmed by adjusting the setting value of selected ones of the discrete divisions in
4 sequence such that any setting value of each prior discrete division is unchanged and any
5 setting value of each subsequent discrete division is automatically adjusted to the value the
6 selected ones of the discrete divisions.

1 12. A method of delivering medication, comprising the steps of:
2 controlling medication delivery by an infusion pump with a control system;
3 estimating an appropriate amount of medication for delivery by the control system
4 with the infusion pump, wherein estimating the appropriate amount of medication for
5 delivery is based upon one or more settings which each vary according to a setting profile.

1 13. The method of claim 12, wherein the step of controlling includes controlling
2 medication delivery according to one or more medication delivery profiles.

1 14. The method of claim 13, wherein the one or more medication delivery profiles
2 includes the appropriate amount of medication estimated by the bolus estimator.

1 15. The method of claim 12, wherein the one or more settings are selected from
2 the group including target blood glucose, carbohydrate ratio and insulin sensitivity.

1 16. The method of claim 12, wherein the setting profile for at least one of the one
2 or more setting includes a value which varies according to a schedule.

1 17. The method of claim 12, wherein the control system is programmed to control
2 medication delivery from a source selected from the group including an RF programmer, a
3 communication station and direct input.

1 18. The method of claim 12, wherein the bolus estimator estimates the appropriate
2 amount of medication based upon one or more event markers stored in a memory.

1 19. The method of claim 18, wherein the one or more event markers track events
2 which affect medication need.

1 20. The method of claim 18, wherein the one or more event markers are selected
2 from the group comprising a meal marker, a snack marker, a high blood glucose marker, a
3 low blood glucose marker, an exercise marker, an illness marker and a stress marker.

1 21. The method of claim 12, wherein the setting profile is entered with a graphical
2 programming interface.

1 22. The method of claim 10, wherein the graphical programming interface
2 includes a series of discrete divisions, each having a setting value and the setting profile is
3 programmed by adjusting the setting value of selected ones of the discrete divisions in
4 sequence such that any setting value of each prior discrete division is unchanged and any
5 setting value of each subsequent discrete division is automatically adjusted to the value the
6 selected ones of the discrete divisions.

1 23. A system for delivering medication, comprising:
2 an infusion pump; and
3 a control system for controlling medication delivery by the infusion pump;
4 wherein the control system includes a suspend function for temporarily suspending
5 medication delivery by the infusion pump.

1 24. The system of claim 23, wherein controlling medication delivery by the pump
2 includes using two or more wave profiles and wherein the control system includes a suspend
3 function for separately suspending each of the two or more wave profiles.

1 25. The system of claim 24, wherein the control system further includes a resume
2 function for selectively restarting each of the more than one wave profile.

1 26. The system of claim 24, wherein the control system further includes a
2 compensating function for delivering a compensating bolus to account for any suspended
3 wave profile.

1 27. The system of claim 24, wherein the suspend function further includes a full
2 suspend function for directly suspending all delivery of medication.

1 28. The system of claim 24, wherein the more than one wave profiles are selected
2 from the group including a square wave bolus profile, a dual wave bolus profile and a basal
3 profile.

1 29. The system of claim 23, wherein the suspend function includes a menu system
2 for selecting a period of time for temporarily suspending medication delivery by the infusion
3 pump.

1 30. The system of claim 29, wherein the menu system includes an array of fixed
2 periods from which to select as the period of time for temporarily suspending medication
3 delivery.

1 31. The system of claim 29, wherein the menu system includes one or more
2 increment periods increment the period of time for temporarily suspending medication
3 delivery.

1 32. The system of claim 29, wherein the menu system includes a specified time of
2 day to select as an end of the period of time for temporarily suspending medication delivery.

1 33. The system of claim 29, wherein after the period of time for temporarily
2 suspending medication delivery by the infusion pump has transpired the pump resumes
3 medication delivery.

1 34. The system of claim 23, wherein the suspend function includes a block
2 function for suspending delivery of medication after a potentially harmful amount of
3 medication is requested by a user and a warning to the user of the potentially harmful amount
4 of medication.

1 35. The system of claim 34, wherein the potentially harmfully amount of
2 medication is an unusually large bolus.

1 36. The system of claim 34, wherein the potentially harmfully amount of
2 medication is a bolus requested too soon after a previous bolus is delivered.

1 37. The system of claim 34, wherein the potentially harmfully amount of
2 medication is too low a total medication dose for the day.

1 38. The system of claim 34, wherein the block function is triggered after a
2 medication measurement integrated over an integration period exceeds a target value.

1 39. The system of claim 38, wherein the block function is alternately triggered
2 because a second medication measurement integrated over a simultaneous and overlapping
3 integration period exceeds the target value.

1 40. The system of claim 38, wherein the integration period is subdivided into a
2 plurality of subperiods and each of the plurality of subperiods is associated with a subtotal
3 representing medication delivered and an oldest subtotal of the subperiods is replaced by a
4 newest subtotal of the subperiods.

1 41. A method of delivering medication, comprising:
2 controlling medication delivery by an infusion pump with a control system; and
3 temporarily suspending medication delivery by the infusion pump with a suspend
4 function of the control system.

1 42. The method of claim 41, wherein the step of controlling medication delivery
2 by the pump includes using two or more wave profiles and wherein the control system
3 includes a suspend function for separately suspending each of the two or more wave profiles.

1 43. The method of claim 42, further including selectively restarting each of the
2 more than one wave profile with a resume function of the control system.

1 44. The method of claim 42, further including delivering a compensating bolus to
2 account for any suspended wave profile with a compensating function of the control system.

1 45. The method of claim 42, wherein the suspend function further includes a full
2 suspend function for directly suspending all medication delivery.

1 46. The method of claim 42, wherein the more than one wave profiles are selected
2 from the group including a square wave bolus profile, a dual wave bolus profile and a basal
3 profile.

1 47. The method of claim 41, wherein the suspend function includes a menu
2 system for selecting a period of time for temporarily suspending medication delivery by the
3 infusion pump.

1 48. The method of claim 47, wherein the menu system includes an array of fixed
2 periods from which to select as the period of time for temporarily suspending medication
3 delivery.

1 49. The method of claim 47, wherein the menu system includes one or more
2 increment periods increment the period of time for temporarily suspending medication
3 delivery.

1 50. The method of claim 47, wherein the menu system includes a specified time
2 of day to select as an end of the period of time for temporarily suspending medication
3 delivery.

1 51. The method of claim 47, wherein after the period of time for temporarily
2 suspending medication delivery by the infusion pump has transpired the pump resumes
3 medication delivery.

1 52. The method of claim 41, wherein the step of temporarily suspending includes
2 suspending delivery of medication with a block function of the control system after a
3 potentially harmful amount of medication is requested by a user and a warning to the user of
4 the potentially harmful amount of medication.

1 53. The method of claim 52, wherein the potentially harmfully amount of
2 medication is an unusually large bolus.

1 54. The method of claim 52, wherein the potentially harmfully amount of
2 medication is a bolus requested too soon after a previous bolus is delivered.

1 55. The method of claim 52, wherein the potentially harmfully amount of
2 medication is too low a total medication dose for the day.

1 56. The method of claim 52, wherein the block function is triggered after a
2 medication measurement integrated over an integration period exceeds a target value.

1 57. The method of claim 56, wherein the block function is alternately triggered
2 because a second medication measurement integrated over a simultaneous and overlapping
3 integration period exceeds the target value.

1 58. The method of claim 56, wherein the integration period is subdivided into a
2 plurality of subperiods and each of the plurality of subperiods is associated with a subtotal
3 representing medication delivered and an oldest subtotal of the subperiods is replaced by a
4 newest subtotal of the subperiods.

1 59. A system for delivering medication, comprising:
2 an infusion pump including an alarm to indicate status of the infusion pump; and
3 a control system for controlling medication delivery by the infusion pump;
4 wherein the control system includes an alarm profile function for programming a
5 variable alarm volume of the alarm.

1 60. The system of claim 59, wherein the alarm profile function varies the variable
2 alarm volume according to a schedule.

1 61. The system of claim 59, wherein the variable alarm volume is set by the user.

1 62. A method of delivering medication, comprising the steps of:
2 controlling medication delivery by an infusion pump with a control system wherein
3 the infusion pump includes an alarm to indicate status of the infusion pump; and

4 activating the alarm according to an alarm profile function when a potentially harmful
5 condition occurs in controlling medication delivery, wherein the alarm profile function
6 includes programming a variable alarm volume of the alarm.

1 63. The method of claim 62, wherein the alarm profile function varies the variable
2 alarm volume according to a schedule.

1 64. The method of claim 62, wherein the variable alarm volume is set by the user.

1 65. A system for delivering medication, comprising:
2 an infusion pump; and
3 a control system for controlling medication delivery by the infusion pump including a
4 dual wave bolus delivery function;

5 wherein the control system comprises a simplified menu for controlling the dual wave
6 bolus delivery function.

1 66. The system of claim 65, wherein the control system further includes a
2 conventional menu for controlling the dual wave bolus delivery function and the simplified
3 menu and the conventional menu are alternately selected.

1 67. The system of claim 65, wherein the simplified menu includes a single entry
2 of a total medication volume, the single entry being divided by a preset ratio into a first wave
3 bolus and a second wave bolus and delivered with a preset delay time between the first wave
4 bolus and the second wave bolus.

1 68. The system of claim 67, wherein the preset ratio and preset delay time are
2 default values set in a pump setup menu.

1 69. The system of claim 68, wherein the control system further includes one or
2 more additional delivery functions and a default delivery mode is selected in the pump setup
3 menu from the dual wave bolus delivery function and the one or more additional delivery
4 functions.

1 70. The system of claim 69, wherein the additional delivery functions include a
2 square wave bolus delivery function and basal delivery function.

1 71. A method of delivering medication, comprising the steps of:
2 controlling medication delivery by an infusion pump with a control system including
3 a dual wave bolus delivery function; and
4 providing a simplified menu for controlling the dual wave bolus delivery function.

1 72. The method of claim 71, wherein the control system further includes a
2 conventional menu for controlling the dual wave bolus delivery function and further includes
3 the step of alternately selecting between the simplified menu and the conventional menu.

1 73. The method of claim 71, wherein the simplified menu includes a single entry
2 of a total medication volume, the single entry being divided by a preset ratio into a first wave
3 bolus and a second wave bolus and delivered with a preset delay time between the first wave
4 bolus and the second wave bolus.

1 74. The method of claim 73, wherein the preset ratio and preset delay time are
2 default values set in a pump setup menu.

1 75. The method of claim 74, wherein the control system further includes one or
2 more additional delivery functions and a default delivery mode is selected in the pump setup
3 menu from the dual wave bolus delivery function and the one or more additional delivery
4 functions.

1 76. The method of claim 75, wherein the additional delivery functions include a
2 square wave bolus delivery function and basal delivery function.

1 77. An system for locating a lost medical device, comprising:
2 a first device of an infusion device and RF remote pair including a transmitter; and
3 a second device of the infusion device and RF remote pair including a receiver and a
4 speaker;
5 wherein the transmitter induces the receiver to direct an audible signal from the
6 speaker to allow a user to locate the second device.

1 78. The system of claim 77, wherein the first device is the RF remote.

1 79. The system of claim 77, wherein the first device is the infusion device.

1 80. An method of locating a lost medical device, comprising:
2 transmitting a signal from a transmitter of a first device of an infusion device and RF
3 remote pair;
4 receiving the signal at a receiver of a second device of the infusion device and RF
5 remote pair; and
6 directing an audible signal from the speaker to allow a user to locate the second
7 device.

1 81. The method of claim 80, wherein the first device is the RF remote.

1 82. The method of claim 80, wherein the first device is the infusion device.